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July 15, 2016

REDACTED – FOR PUBLIC INSPECTION

Ex Parte Notice

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Katie King
Telecommunications Access Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Connect America Fund*, WC Docket No. 10-90; *Universal Service Reform – Mobility Fund*, WT Docket No. 10-208

Dear Ms. Dortch and Ms. King:

On behalf of General Communication, Inc. ("GCI"), the undersigned counsel submits the redacted version of the attached ex parte letter pursuant to the *Second Protective Order*.[1] The letter contains information that GCI previously filed as Highly Confidential after requesting and receiving written approval as required by the *Order*. Pursuant to the *Order*, we submit (a) one copy of the filing containing Highly Confidential Information to the Secretary's Office along with this cover letter; (b) two copies of the filing in redacted form to the Secretary's Office along with the redacted cover letter; and (c) two copies of the filing containing Highly Confidential information to Katie King of the Telecommunications Access Policy Division of the Wireline Competition Bureau. We will also file a redacted copy of the ex parte letter via ECFS.

[1] *See Connect America Fund, High-Cost Universal Service Support*, Second Protective Order, DA 12-192, 27 FCC Rcd. 1494 (Wireline Comp. Bur. 2012).

Please contact me if you have any questions.

Sincerely,

Julie A. Veach
Counsel to General Communication, Inc.

cc: Jim Schlichting
Chris Helzer
Paroma Sanyal
Tom Tran

Enclosure

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Ex Parte Notice

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Connect America Fund*, WC Docket No. 10-90; *Universal Service Reform – Mobility Fund*, WT Docket No. 10-208

Dear Ms. Dortch:

At the request of the Wireless Telecommunications Bureau, General Communication, Inc. ("GCI") provides additional details regarding certain inputs to the Modified Brattle Model.[1] GCI submitted the Model earlier in this proceeding to estimate the incremental cost of deploying LTE to areas of remote Alaska that would be eligible for support pursuant to the Alaska Plan.

Satellite Backhaul Provisioning. The Model uses costs derived from GCI's system of provisioning satellite backhaul capacity in estimating the costs to deploy LTE to eligible locations. GCI provisions two pools of capacity, which are shared among rural remote ground stations. The amount of capacity remains constant from month to month until GCI provisions a change to accommodate increased demand. One pool of capacity uses the even polarization, and the other pool uses the odd polarization.

Satellite Capital Expenditures. In the Modified Brattle Model, satellite capital expenditures are the product of the number of cell sites at which backhaul is accomplished via satellite and the capital expenditure needed at each remote ground station. The capital expenditure per cell site in the Modified Brattle Model is **[[BEGIN [redacted] END]]**.[2] This is

[1] *See* Modified Alaska Mobile Broadband Cost Model ("Modified Brattle Model" or "Model"), *attached to* Letter from John T. Nakahata, Counsel to General Communication, Inc., to Marlene H. Dortch and Katie King, FCC, WC Docket No. 10-90, WT Docket No. 10-208 (filed May 10, 2016).

[2] Modified Brattle Model Table VI-2.

higher than the capital expenditure per cell site included in the original model, and is explained by the costs associated with satellite transmission over the C-band. GCI's engineering team believes that the C-band provides superior transmission and is less susceptible to rain fade, and is essential for use in satellite backhaul, even though the associated equipment cost is higher than that associated with the Ku-band.

Spectral Efficiency. In calculating the amount of satellite backhaul needed to support deployment of LTE services to eligible locations, the Model assumes a spectral efficiency of **[[BEGIN ■■ END]]** bits per second per Hz downstream, and **[[BEGIN ■■ END]]** bits per second per Hz upstream.[3] This is the spectral efficiency rate that GCI has recently achieved, on average, on iDirect equipment with signals carried on the C-band.

Operating Expenses at Upgraded Sites. The Modified Brattle Model includes a lower cost for operating expenses at upgraded cell sites than at new ones. The lower costs are largely attributed to lower incremental maintenance expenses, HVAC costs, and licensing fees (from equipment vendors) than would be the case for new sites. The incremental costs for existing towers assume that those towers remain at existing heights and locations. For new towers, the Model assumes a mix of 60 foot towers with non-ground-penetrating foundations and 80 foot towers with traditional foundations.[4] The operating expenses at these new towers are based on these tower characteristics.

Equipment Costs for Microwave Backhaul. The Model based the cost of microwave backhaul on the "all in" price of the providers. Under this arrangement, the costs of microwave equipment are included in the price of the service. Thus, for modeling purposes, any associated equipment costs are included in the monthly cost of microwave backhaul (rather than any separate microwave backhaul-related capital costs).

* * * * *

The Modified Brattle Model inputs and underlying assumptions reflect the extraordinary expense involved in deploying communications infrastructure in remote Alaska. While GCI and The Brattle Group believe that these inputs and assumptions are reasonable, we also note that the Model estimates the present value of the total incremental cost to bring 4G LTE to all remote

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[3] Modified Brattle Model, Table VI-3.

[4] For general reference, GCI previously provided information on tower construction in challenging areas. *See* Letter from Julie A. Veach, Counsel to General Communication, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90, WT Docket No. 10-208 (filed May 25, 2016).

Alaskans currently limited to 2G or 3G service to be $1,303,209,324,[5] which is more than two and a half times the amount of frozen support proposed in the Alaska Plan to be made available to CETCs for this effort.[6] Put another way, even if some of these assumptions and inputs were modified in a way that produced a lower estimated cost of deployment, any reasonable cost estimate will still far exceed the amount of universal support available.

If you have any questions, please communicate with me at jveach@hwglaw.com or (202) 730-1311.

Sincerely,

Julie A. Veach
Counsel to General Communication, Inc.

cc: Jim Schlichting
Chris Helzer
Paroma Sanyal
Tom Tran

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[5] The Model summary chart shows that the present value of the incremental cost to deploy LTE to the eligible areas of remote Alaska, other than "Wireless unserved" areas, is $1,303,209,324. *See* Modified Brattle Model, Table II-1 (sum of common network costs, wireless served, and current 3G entries of Total Cost column). This figure is an update of the figure provided to the Commission before the Modified Brattle Model was finalized and filed. *See* Letter from John T. Nakahata, Counsel to General Communication, Inc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90, WT Docket No. 10-208, at 4 (filed May 3, 2016).

[6] Based on the most recent information filed by the Alaska Telephone Association, the total amount of frozen support proposed to be made available to CETCs pursuant to the Alaska Plan to bring LTE to areas currently served with some level of mobile service is $739,375,080, the present value of which at a discount rate of 7.5% is $507,513,041. *See* Alaska Infrastructure Fund Universal Service Support Schedules, Schedule 2, *attached to* Letter from Christine O'Connor, Executive Director, Alaska Telephone Association, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (filed May 9, 2016).